



CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)



An ISO 9001-2015 Certified Company
NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No: CACE/BBMP/LNR/W.No.03/2021-22

Date: 18.08.2021

TEST REPORT

CLIENT	:	Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
AGENCY	:	Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
NAME OF THE WORK	:	Improvements to Roads and footpaths at Yelahanka New Town 4 th Phase, 5 th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
SAMPLE ID	:	Cement (Zuari OPC 53 Grade)
DATE OF MANUFACTURE	:	July 2021
DATE OF TESTING	:	16.08.2021 to 18.08.2021
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 269-2015
1	a) Initial Setting Time	IS-4031 (Part -5)	130 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	340 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	30.00 %	-

Note:

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- ⇒ Any Query regarding the report must be reported within 30days from the date of testing.

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For CIVIL AIM CONSULTANTS & ENGINEERS

Handwritten signature and stamp.
Authorised Signatory

1, Satvika Niaya, Opp. Widia Poorna Prajna School,
ahah layout, Nagasandra, Bangalore - 560 073.

Mo: 9591618639 GST IN:29CNWPD9510K1ZB Email:civilaimconsultants@gmail.com



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Job No.: CACE/BBMP/LNR/W.No.03/2021-22

Date : 18.08.2021

TEST REPORT ON FINE AGGREGATES (SAND)

Client : Assistant Executive Engineer, Yelahanka New Town Sub division, BBMP, Bangalore.

Contractor : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

Work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

Testing Date : 18.08.2021

Code : IS 383:2016
IS 2386 (Part 1):1963(RA 2011)

Material : Sand

Total Wt. of Aggregates in gms : 1000

Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	84	8.40	8.40	91.6	90-100
2.36	122	12.20	20.60	79.4	75-100
1.18	189	18.90	39.50	60.5	55-90
600 Micron	159	15.90	55.40	44.6	35-59
300 Micron	217	21.70	77.10	22.9	8-30
150 Micron	176	17.60	94.70	5.3	0-10

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ಸರ್ಕಾರಿ ಕಾರ್ಯಾಲಯ
ಸರ್ಕಾರಿ ಕಾರ್ಯಾಲಯ-108

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

Satvika Nilaya, Opp. Widia Poorna Prajna School,
ah layout, Nagasandra, Bangalore - 560 073.

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No.: CACE/BBMP/LNR/W.No.03/2021-22

Date : 23.08.2021

TEST REPORT ON CEMENT CONCRETE BLOCKS

Client : Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
 Agency : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
 Name of the Work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
 Date of Testing : 23.08.2021
 Size of Blocks : 400mm x 200mm x 200mm
 Gross Sectional Area : 80000 mm²
 Technical Reference : IS: 2185 (Part 1) - 2005
 No. of Blocks Tested : 04

Sl.No.	Block ID	Wt. in Kg	Failure load (N)	Compressive strength (N/mm ²)	Block Density in Kg/M ³	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	32.5	339.5	4.24	2031.25	Minimum required Compressive Strength of Individual Units 4.00N/mm ²
2	Block 2	33.9	346.2	4.33	2118.75	
3	Block 3	32.4	340.2	4.25	2025.00	
4	Block 4	34.2	342.8	4.29	2137.50	

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ಸಹಾಯಕ ಕಾರ್ಯದರ್ಶಿ
ಯುಟಿಲಿಟಿ ಮತ್ತು ಸಾರ್ವಜನಿಕ ಕಾರ್ಯಗಳು
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For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

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Date: 20.09.2021

No.: CACE/BBMP/LNR/W.No.03/2021-22

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

ent : Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

gency : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

me of the work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

mple ID : Cement Concrete for Raft

ze of cubes : 150mmx150mmx150mm

ross Sectional Area : 22500 mm²

chnical Reference : IS: 516-1959 (Reaffirmed 2008)

rade of Concrete : M₂₀

ompressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	23.08.2021	20.09.2021	8.148	515.2	22.90
2	23.08.2021	20.09.2021	8.192	488.9	21.73
3	23.08.2021	20.09.2021	8.164	496.2	22.05

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ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧ್ಯಯನಾಧಿಕಾರಿ
ಯುಪಕರಣ ಉಪನಿರ್ದೇಶಕರು
ಜಿ.ಡಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-100

For CIVIL AIM CONSULTANTS & ENGINEERS,

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Authorised Signatory

Atvika Nilaya, Opp. Widia Poorna Prajna School,
Layout, Nagasandra, Bangalore - 560 073.

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Date: 22.09.2021

Job No.: CACE/BBMP/LNR/W.No.03/2021-22

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

Name of the work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

Sample ID : Cement Concrete for Wall

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm²

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M₂₀

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	25.08.2021	22.09.2021	8.199	500.8	22.26
2	25.08.2021	22.09.2021	8.146	516.4	22.95
3	25.08.2021	22.09.2021	8.158	489.6	21.76

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ಯಲಹಂಕ ನಗರ ಸುಪರವಿಧಾನ.
ಇ.ಇ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-108

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

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Date: 22.09.2021

Job No.: CACE/BBMP/LNR/W.No.03/2021-22

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

Name of the work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

Sample ID : Cement Concrete for Wall

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm²

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M₂₀

Compressive Strength as on : 28th day

SLNo.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	25.08.2021	22.09.2021	8.184	516.3	22.95
2	25.08.2021	22.09.2021	8.166	524.6	23.32
3	25.08.2021	22.09.2021	8.158	498.3	22.15

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For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

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Date: 03.09.2021

Job No.: CACE/BBMP/LNR/W.No.03/2021-22

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

Name of the work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

Sample ID : Cement Concrete for Culvert Raft

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm²

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M₂₀

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	27.08.2021	03.09.2021	8.169	334.2	14.85
2	27.08.2021	03.09.2021	8.184	365.2	16.23
3	27.08.2021	03.09.2021	8.172	346.8	15.41

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ಇ.ಪಿ.ಎಂ.ಸಿ. ಕಛೇರಿ-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

Satvika Nilaya, Opp. Widia Poorna Prajna School,
Yelahanka layout, Nagasandra, Bangalore - 560 073.

Phone: 9591618639 GST IN:29CNWPD9510K1ZB Email:civilaimconsultants@gmail.com



CIVIL AIM CONSULTANTS & ENGINEERS

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Date: 24.09.2021

b No.: CACE/BBMP/LNR/W.No.03/2021-22

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

Name of the work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

Sample ID : Cement Concrete for Culvert Raft

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm²

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M₂₀

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	27.08.2021	24.09.2021	8.168	505.2	22.45
2	27.08.2021	24.09.2021	8.184	519.3	23.08
3	27.08.2021	24.09.2021	8.156	486.4	21.62

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ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಇಂಜಿನಿಯರ್
ಯಂತ್ರೋಪಕರಣ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

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Date: 24.09.2021

No.: CACE/BBMP/LNR/W.No.03/2021-22

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

Name of the work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

Sample ID : Cement Concrete for Raft

Size of cubes : 150mmx150mmx150mm

Gross Sectional Area : 22500 mm²

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M₂₀

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	27.08.2021	24.09.2021	8.128	512.2	22.76
2	27.08.2021	24.09.2021	8.178	508.9	22.62
3	27.08.2021	24.09.2021	8.162	484.6	21.54

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ಶಿವಕುಮಾರ ಕಾರ್ತಿಕೇಶ್ವರ
ಯುನೈಟೆಡ್ ಉಪನಿರ್ದೇಶಕರು
ಡಿ.ಡಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

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No.: CACE/BBMP/LNR/W.No.03/2021-22

Date: 07.09.2021

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

Name of the work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

Sample ID : Cement Concrete for Wall

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm²

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M₂₀

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	30.08.2021	07.09.2021	8.148	329.6	14.65
2	30.08.2021	07.09.2021	8.166	354.2	15.74
3	30.08.2021	07.09.2021	8.154	349.2	15.52

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ಯಲಹಂಕ ನಗರ ಪಾಲಿಕೆ
ಇ.ಇ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-108

For CIVIL AIM CONSULTANTS & ENGINEERS

(Signature)
07/09/2021

Satvika Nilaya, Opp. Widia Poorna Prajna School,
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No.: CACE/BBMP/LNR/W.No.03/2021-22

Date: 08.09.2021

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

Name of the work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

Sample ID : Cement Concrete for culvert wall

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm²

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M₂₀

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	01.09.2021	08.09.2021	8.184	336.5	14.96
2	01.09.2021	08.09.2021	8.169	346.2	15.39
3	01.09.2021	08.09.2021	8.152	358.9	15.95

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ಸಹಾಯಕ ಅಂಗೀಕರಣಾಧಿಕಾರಿ
ಯಲಹಂಕ ನಗರಾಭಿವೃದ್ಧಿ ಅಧಿಕಾರಿ,
ಬಿ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-108

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory



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No.: CACE/BBMP/LNR/W.No.03/2021-22

Date: 08.09.2021

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency: Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

Line of the work: Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

Sample ID: Cement Concrete for Wall

Size of cubes: 150mmx150mmx150mm

Gross Sectional Area: 22500 mm²

Technical Reference: IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete: M₂₀

Compressive Strength as on: 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	01.09.2021	08.09.2021	8.184	345.2	15.34
2	01.09.2021	08.09.2021	8.169	339.6	15.09
3	01.09.2021	08.09.2021	8.152	326.4	14.51

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ಸಹಾಯಕ ನಿರ್ದೇಶಕರು, ಅಭಿವೃದ್ಧಿ
ಯೋಜನೆ, ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

Satvika Nilaya, Opp. Widia Poorna Prajna School,
Nagashayana, Nagasandra, Bangalore - 560 073.

9591618639 GST IN:29CNWPD9510K1ZB Email:civilaimconsultants@gmail.com



CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)



An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

No.: CACE/BBMP/LNR/W.No.03/2021-22

Date: 29.09.2021

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency: Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

Name of the work: Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

Sample ID: Cement Concrete for Wall

Size of cubes: 150mmx150mmx150mm

Gross Sectional Area: 22500 mm²

Technical Reference: IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete: M₂₀

Compressive Strength as on: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	01.09.2021	29.09.2021	8.174	505.2	22.45
2	01.09.2021	29.09.2021	8.156	516.8	22.97
3	01.09.2021	29.09.2021	8.138	524.3	23.30

Note:

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ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧ್ಯಯನಕರು
ಯಲಹಂಕ ನಗರ ಪಂಚಾಯತ್,
ಬಿ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-108

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

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ah layout, Nagasandra, Bangalore - 560 073.

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NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Id.: CACE/BBMP/LNR/W.No.03/2021-22

Date: 09.09.2021

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

nt : Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

ncy : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

me of the work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

nple ID : Cement Concrete for raft

e of cubes : 150mmx150mmx150mm

ss Sectional Area : 22500 mm²

chnical Reference : IS: 516-1959 (Reaffirmed 2008)

ade of Concrete : M₃₀

ompressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	02.09.2021	09.09.2021	8.188	336.3	14.95
2	02.09.2021	09.09.2021	8.194	345.2	15.34
3	02.09.2021	09.09.2021	8.162	352.8	15.68

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ಯುಪನಿಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-106

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

Satvika Nilaya, Opp. Widia Poorna Prajna School,
ah layout, Nagasandra, Bangalore - 560 073.

9591618639 GST IN:29CNWPD9510K1ZB Email:civilaimconsultants@gmail.com

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An ISO 9001-2015 Certified Company
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Date: 10.09.2021

Ref: CACE/BBMP/LNR/W.No.03/2021-22

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

at : Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Project : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

name of the work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.

Sample ID : Cement Concrete for Wall

Size of cubes : 150mmx150mmx150mm

Test Sectional Area : 22500 mm²

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M₂₀

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	03.09.2021	10.09.2021	8.189	336.3	14.95
2	03.09.2021	10.09.2021	8.194	345.8	15.37
3	03.09.2021	10.09.2021	8.162	352.9	15.68

Note:

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ಯಲಹಂಕ ನಗರ ಪಂಚಾಯತ್, ಬೆಂಗಳೂರು-108

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

Job: CACE/BBMP/LNR/W.No.03/2021-22

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
Contractor: Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
Location: Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
Material: Cement Concrete for Wall
Size of cubes: 150mmx150mmx150mm
Cross Sectional Area: 22500 mm²
Technical Reference: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete: M₂₀
Compressive Strength as on: 28th day

SL.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	03.09.2021	01.10.2021	8.189	519.6	23.09
2	03.09.2021	01.10.2021	8.165	505.8	22.48
3	03.09.2021	01.10.2021	8.480	488.9	21.73

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ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ - ನಿಯಂತ್ರಣ
ಯಂತ್ರಣ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಅ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-108

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

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No: CACE/BBMP/LNR/W.No.03/2021-22

Date: 13.09.2021

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
Contractor: Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
Project: Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
Material: Cement Concrete for Wall
Cube size: 150mmx150mmx150mm
Cross Sectional Area: 22500 mm²
Technical Reference: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete: M₂₀
Compressive Strength as on: 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	06.09.2021	13.09.2021	8.165	336.3	14.95
2	06.09.2021	13.09.2021	8.138	346.5	15.40
3	06.09.2021	13.09.2021	8.149	355.8	15.81

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For CIVIL AIM CONSULTANTS & ENGINEERS
Authorised Signatory

Job: CACE/BBMP/LNR/W.No.03/2021-22

Date: 16.09.2021

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

at : Assistant Executive Engineer, Yelahanka New Town Sub Division,
BBMP, Bangalore.

Agency : Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.

name of the work : Improvements to Roads and footpaths at Yelahanka New Town 4th Phase,
5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub
Division (Package-14), BBMP, Bangalore.

Sample ID : Cement Concrete for Wall

Number of cubes : 150mmx150mmx150mm

Gross Sectional Area : 22500 mm²

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M₂₀

Compressive Strength as on : 7th day

SLNo.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	09.09.2021	16.09.2021	8.169	356.3	15.84
2	09.09.2021	16.09.2021	8.184	332.6	14.78
3	09.09.2021	16.09.2021	8.119	346.5	15.40

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ಯಶವಂತ ನಗರ ಮಹಾನಗರ
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For CIVIL AIM CONSULTANTS & ENGINEERS


Authorised Signatory

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CACE/BBMP/LNR/W.No.03/2021-22

Date: 09.09.2021

PRECAST SLAB 100mm Thick(CORE) TEST REPORT

for
[Work
Sample Tested
Testing
cal Reference
[Concrete

: Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
: Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
: Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
: 03
: 09.09.2021
: IS:516-1959 (Reaffirmed 1999), SP-24:1983.
: M₁₅

Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m ³)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm ²)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm ²)	Equivalent Cube Compressive Strength (N/mm ²)
50.00	83.00	0.381	2337.85	1.66	0.963	32.10	16.35	17.66	17.01	21.26
50.00	85.00	0.396	2372.72	1.70	0.968	33.50	17.06	18.43	17.83	22.29
50.00	87.00	0.409	2394.28	1.74	0.972	33.90	17.27	18.65	18.12	22.65

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e results indicated above are based on the tests carried out on the samples collected at the site.
y Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

ಸಹಾಯಕ ಅಯುಕ್ತರಾದ ಸಹಾಯಕರು
ಯು.ಎಂ.ಎ. ಬೆಂಗಳೂರು-108

Atvika Nilaya, Opp. Widia Poorna Prajna School,
Layout, Nagasandra, Bangalore - 560 073.
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CE/BBMP/LNR/W.No.03/2021-22

Date: 10.09.2021

KERB STONE (CORE) TEST REPORT

ork : Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
: Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
: Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
le Tested : 03
iting : 10.09.2021
reference : IS-516-1959 (Reaffirmed 1999), SP-24:1983.
oncrete : M₁₅

Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m ³)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm ²)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm ²)	Equivalent Cube Compressive Strength (N/mm ²)
50.00	72.00	0.332	2348.42	1.44	0.940	25.40	12.94	13.97	13.13	16.41
50.00	74.00	0.342	2353.77	1.48	0.944	26.30	13.39	14.47	13.65	17.07
50.00	76.00	0.356	2385.65	1.52	0.948	26.90	13.70	14.80	14.03	17.54

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For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

ಸಹಾಯಕ ಅಭಿವೃದ್ಧಿ ಇಂಜಿನಿಯರ್
ಯಶಸ್ವಿ ಉಪಾಧ್ಯಕ್ಷರು
03.09.21 ರಿಂದಿರುವ-1007

ka Nilaya, Opp. Widia Poorna Prajna School,
out, Nagasandra, Bangalore - 560 073.
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NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

No.: CACE/BBMP/LNR/W.No.03/2021-22

Date: 20.09.2021

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
Agency: Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
Name of the work: Improvements to Roads and footpaths at Yelahanka New Town 4th Phase, 5th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
Sample ID: Cement Concrete for Culvert Ramp
Size of cubes: 150mmx150mmx150mm
Gross Sectional Area: 22500 mm²
Technical Reference: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete: M₁₅
Compressive Strength as on: 7th day

No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	13.09.2021	20.09.2021	8.165	275.2	12.23
2	13.09.2021	20.09.2021	8.154	262.9	11.68
	13.09.2021	20.09.2021	8.128	282.4	12.55

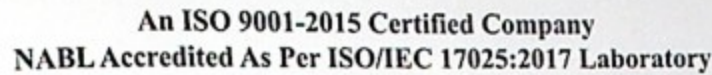
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Kalyan, Nagasandra, Bangalore - 560 073.
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(Building Geo-Tech & Highway Materials Testing Laboratory)



Date: 11.10.2021

	: Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
y	: Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
of the work	: Improvements to Roads and footpaths at Yelahanka New Town 4 th Phase, 5 th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
e ID	: Cement Concrete for Culvert Ramp
ucres	: 150mmx150mmx150mm
Sectional Area	: 22500 mm ²
ical Reference	: IS: 516-1959 (Reaffirmed 2008)
of Concrete	: M ₁₅
ressive Strength as on	: 28th day

S. No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
	13.09.2021	11.10.2021	8.170	384.3	17.08
	13.09.2021	11.10.2021	8.162	376.9	16.75
	13.09.2021	11.10.2021	8.138	362.5	16.11

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For CIVIL AIM CONSULTANTS & ENGINEERS

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Job No.: CACE/BBMP/LNR/W.No.03/2021-22

Date : 26.09.2021

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
Agency	Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
Name of Work	Improvements to Roads and footpaths at Yelahanka New Town 4 th Phase, 5 th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	26.09.2021

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	11.50	11.80	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	13.60	13.90	
	Combined Flakiness & Elongation index	25.10	25.70	

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For CIVIL AIM CONSULTANTS & ENGINEERS

S. S. S. C.
Authorised Signatory

Vika Nilaya, Opp. Widia Poorna Prajna School,
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Job No.: CACE/BBMP/LNR/W.No.03/2021-22

Date : 04.10.2021

Aggregate Gradation Test IS : 2386 Part I

Client	Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
Agency	Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
Name of the Work	Improvements to Roads and footpaths at Yelahanka New Town 4 th Phase, 5 th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
IS Code	IS 2386(Part I):1963
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	04.10.2021
Total Weight of Sample:	5000 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Requirement as per MORTH table 500.17	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	415	8.30	8.30	91.70	90 - 100	
9.5	488	9.76	18.06	81.94	70 - 88	
4.75	635	12.70	30.76	69.24	53 - 71	
2.36	689	13.78	44.54	55.46	42 - 58	
1.18	520	10.40	54.94	45.06	34 - 48	
0.600	468	9.36	64.30	35.70	26 - 38	
0.300	498	9.96	74.26	25.74	18 - 28	
0.150	388	7.76	82.02	17.98	12 - 20	
0.075	515	10.30	92.32	7.68	4 - 10	
Total Weight of Sample:		5000 gm				

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Requirement as per MORTH table 500.17	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	410	8.20	8.20	91.80	90 - 100	
9.5	535	10.70	18.90	81.10	70 - 88	
4.75	655	13.10	32.00	68.00	53 - 71	
2.36	589	11.78	43.78	56.22	42 - 58	
1.18	526	10.52	54.30	45.70	34 - 48	
0.600	540	10.80	65.10	34.90	26 - 38	
0.300	698	13.96	79.06	20.94	18 - 28	
0.150	198	3.96	83.02	16.98	12 - 20	
0.075	468	9.36	92.38	7.62	4 - 10	
Total Weight of Sample:		5000 gm				

Note:

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- ⇒ The results indicated above are based on the tests carried out on the samples collected at the site.
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For CIVIL AIM CONSULTANTS & ENGINEERS
Authorised Signatory

Vika Nilaya, Opp. Vidya Peorna Prajna School,
Layout, Nagasandra, Bangalore - 560 073.
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Job No: CACE/BBMP/LNR/W.No.03/2021-22

Date: 09.10.2021

TEST REPORT ON STABILITY OF MIX

Client	:	Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
Agency	:	Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
Name of the Work	:	Improvements to Roads and footpaths at Yelahanka New Town 4 th Phase, 5 th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Bituminous Concrete
Date of Testing	:	09.10.2021

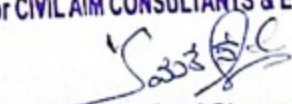
The results of the tests conducted on the Bituminous Concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	10.23	9.85	9 Kn (min)
2	Marshal flow, mm	2.46	3.24	2 - 4
3	Percent air voids in Mineral Aggregate	13.74	14.59	13 - 15
4	Voids in Compacted Mix	3.79	4.51	3 - 6
5	Percent Voids filled with Bitumen	68.75	69.18	65 - 75
6	Density, g/cc	2.25	2.26	--

Note:

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- ⇒ The results indicated above are based on the tests carried out on the samples collected at the site.
- ⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL AIM CONSULTANTS & ENGINEERS


Authorised Signatory

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CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)



An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

Job No.: CACE/BBMP/LNR/W.No.03/2021-22

Date : 09.10.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	Assistant Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
AGENCY	Sri. Lakshmi Narayana Reddy, Contractor, Bangalore.
NAME OF THE WORK	Improvements to Roads and footpaths at Yelahanka New Town 4 th Phase, 5 th Phase and Industrial areas in Ward No.03 of Yelahanka New Town Sub Division (Package-14), BBMP, Bangalore.
SAMPLE ID	Hot Mix Plant, Bangalore
DATE OF TESTING	09.10.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472	472.5
3. Weight of Asphalt and Mineral matter Extracted, g	28	27.5
4. Weight of Mineral Matter, g	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g (corrected)	28	27.5
7. Bitumen content in %	5.60	5.50
8. Average	5.55	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1				Requirement as per MORTH table
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	500.17
15.2	12.6	12.6	2.7	97.3	100
9.5	69.5	82.1	17.4	82.6	90 - 100
4.75	90.8	172.9	36.6	63.4	70 - 88
2.36	45.6	218.5	45.3	53.7	53 - 71
1.18	33.9	252.4	53.5	46.5	42 - 58
0.600	50.8	303.2	64.2	35.8	34 - 48
0.300	42.6	345.8	73.3	26.7	26 - 38
0.150	39.5	385.3	81.6	18.4	18 - 28
0.075	50.4	435.7	92.3	7.7	12 - 20
					4 - 10

SIEVE SIZE mm	Test 2				Requirement as per MORTH table
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	500.17
15.2	14.9	14.9	3.2	96.8	100
9.5	66.8	81.7	17.3	82.7	90 - 100
4.75	90.4	172.1	26.4	63.6	70 - 88
2.36	40.8	212.9	45.1	54.9	53 - 71
1.18	46.3	259.2	54.9	45.1	42 - 58
0.600	55.8	315	66.7	33.3	34 - 48
0.300	42.8	357.8	75.7	24.3	26 - 38
0.150	36.2	394	83.4	16.6	18 - 28
0.075	50.9	444.9	94.2	5.8	12 - 20
					4 - 10

Note:

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